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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,267	08/18/2000	Kenneth R Goguen	07072-939001	7447
7590		02/04/2005	EXAMINER	
Hale and Dorr LLP		BARAN, MARY C		
60 State Street		ART UNIT		
Boston, MA 02109		PAPER NUMBER		
		2857		

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,267

Applicant(s)

GOGUEN ET AL.

Examiner

Mary Kate B Baran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The action is responsive to the arguments and amendments filed on 10 January 2004. Claims 1-9 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voigt et al. (U.S. Patent No. 5,623,598) (hereinafter Voigt) in view of Harrison et al. (U.S. Patent No. 6,128,717) (hereinafter Harrison) and further in view of Conner et al. (U.S. Patent No. 5,867,686) (hereinafter Conner).

Referring to claim 1, Voigt teaches a method for presenting system performance to a user in a mass storage system (see Voigt, Figures 5-7), the storage system having a plurality of disk drive storage elements (see Voigt, Figure 2, storage disks 32) controlled by a disk drive controller (see Voigt, Figure 2, "disk array controller 34" and column 3 lines 5-9), said controller receiving commands and data from (see Voigt, column 4 line 65 – column 5 line 5 and column 5 lines 14-38) and returning at least data to a host computer (see Voigt, column 6 lines 5-13), the method includes the steps:

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executing a test request by sending commands to said mass storage system (see Voigt, column 5 lines 29-31), accumulating, at said executing host computer, data regarding performance of said mass storage system, in response to the requests sent by said host computer (see Voigt, column 5 lines 20-24), and presenting said accumulated data, in a graphical plot format (see Voigt, Figures 5-7), for enabling the visualization of trends in the performance of said mass storage system as a function of at least one selected parameter, in response to said host generated commands (see Voigt, column 6 lines 10-13 and lines 24-29). Voigt does not teach a controller connected to a plurality of host computers or sending commands to said mass storage system in time synchronized fashion.

Harrison teaches a controller (i.e. interface structure 14) which is connected to plurality of host computers (i.e. network environment 12) (see Harrison, column 7 lines 3-11 and Figure 2).

Conner teaches sending commands to said mass storage system in time synchronized fashion (see Conner, Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was to modify Voigt to include the teachings of Harrison because providing performance data for a plurality of hosts can enhance the overall performance of the storage system (see Harrison, column 5 lines 46-53), and to further include the teachings of Conner because sending commands to said mass storage system in a time synchronized fashion would have allowed the skilled artisan to transfer data to and from a mass storage device without the software overhead and would allow multiple hosts to

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read and write to the mass storage device independently in real time (see Conner, column 1 lines 9-19).

Referring to claim 2, Voigt further teaches the method wherein the parameter is time (see Voigt, column 6 lines 5-6).

Referring to claim 5, Voigt further teaches the method wherein said presenting step displays said data on a computer display in said graphical format (see Voigt, column 6 lines 10-13 and Figures 5-7).

Referring to claim 6, Voigt further discloses the method wherein said method further comprises selecting at least one test phase for viewing in said graphical plot format (see Voigt, column 6 lines 29-33 and Figures 5-7).

Referring to claim 7, Voigt further teaches displaying, in association with said graphical plot format, parameters relating to the graph (see Voigt, column 6 lines 33-36 and Figures 5-7).

Referring to claim 8, Voigt further teaches parameters which include at least one of the nature of the test, the size of data blocks which have been used, and the number of data points (see Voigt, column 5 lines 1-5).

Referring to claim 9, Voigt further teaches enabling a user to display multiple graphs on a single sheet (see Voigt, Figure 7).

3. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voigt et al. (U.S. Patent No. 5,623,598) (hereinafter Voigt) in view of Harrison et al. (U.S. Patent No. 6,128,717) (hereinafter Harrison) in view of Conner et al. (U.S. Patent No. 5,867,686) (hereinafter Conner) and further in view of Oshelski et al. (U.S. Patent No. 5,586,059) (hereinafter Oshelski).

Referring to claim 3, as noted above Voigt, Harrison and Conner teach all but a method wherein said accumulating step accumulates said data in a plurality of databases, and said method further comprises selecting one of said databases for viewing.

Oshelski teaches extracting data and storing the data in a plurality of databases (see Oshelski, column 5 lines 44-47) and accessing these files to analyze and display in user-specified formats which include charts and graphs (see Oshelski, column 5 lines 30-40).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Voigt, Harrison and Conner to include the teachings of Oshelski because extracting and storing the data in a plurality of databases and accessing these files to analyze and display the data in graphical form would have allowed the skilled artisan to make the requested data easier to access and faster to plot.

Referring to claim 4, as noted above Voigt and Harrison teach all but a method wherein said presenting step prints said data in said graphical plot format.

Oshelski discloses printing data (see Oshelski, column 6 lines 17-20) in a user-selected format, which includes charts or graphs (see Oshelski, column 5 lines 37-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Voigt, Harrison and Conner to include the teachings of Oshelski because printing the data in graphical form would have allowed the skilled artisan to provide the user with a hard copy of the performance data in case of system error or for publication.

Response to Arguments

4. Applicant's arguments filed 24 December 2003 have been fully considered but they are not persuasive.

Applicant argues that combination of Voigt (U.S. Patent No. 5,623,598) and Harrison (U.S. Patent No. 6,128,717) does not teach "executing at a plurality of said host computers a test request by sending commands to said mass storage system, and accumulating, at said executing host computers, data regarding performance of said mass storage system, in response to the requests sent by said host computers."

Applicant's arguments are not well taken. Voigt teaches that firmware is installed in a controller to collect measurement data (see Voigt, column 5 lines 14-19). This controller located in the data storage system is independent of the host computer disclosed in Voigt (see Voigt, Figure 1 "data storage system 14", "host 12"). Voigt does not teach

modifying the host computer in any way, such as installing software, in order for the host computer to request data. Therefore, if a network environment (i.e., plurality of host computers) as taught in Harrison (see Harrison, column 7 lines 3-11 and Figure 2) were connected to the data storage system, as taught by Voigt (see Voigt, column 2 lines 65-67 and Figure 1), each individual host would have the same ability to send requests and collect the requested data (see Voigt, column 5 lines 20-24)

Applicant further argues that Harrison does not teach collected data regarding the performance of a mass storage system. Applicant's arguments are not well taken. Performance is the way in which something functions. Harrison teaches collecting disk data pertaining to the total number of read/write operations (see Harrison, column 12 lines 45-46), the total number of reads in a time unit (see Harrison, column 12 lines 47-48), the number of writes in a time unit (see Harrison, column 12 lines 48-49), and various other types of functional data (see Harrison, column 12 lines 39-65).

Applicant further argues that Voigt and Harrison do not teach sending commands to said mass storage system in time synchronized fashion. This limitation is met by Conner, who teaches sending commands to said mass storage system in time synchronized fashion (see Conner, Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was to modify Voigt and Harrison to include the teachings of Conner because sending commands to said mass storage system in a time synchronized fashion would have allowed the skilled artisan to transfer data to and from a mass storage device without the software overhead and would allow

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multiple hosts to read and write to the mass storage device independently in real time (see Conner, column 1 lines 9-19).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday - Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MKB


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